102 Associated Data

Functional Group ID=AC

Introduction:

This Draft Standard for Trial Use contains the format and establishes the data contents of the Associated Data Transaction Set (102) for use within the context of an Electronic Data Interchange (EDI) environment. This transaction set may be used to convey associated data. Associated data is defined as an object, a set of functionally-related information not using the usual transaction set structure in segments. The complete set of information constituting an object, including the information necessary to uniquely identify an object, is defined as a package. Objects may include graphic, text, parametric, tabular, image, spectral, audio, etc. data. The character set repertoire of an object is not governed by the character set repertoire identified for any accompanying transaction sets contained in the interchange. Associated data may be linked with other business transactions as an augmentation to other functional data. Therefore, referencing capabilities properly relating the object to the associated transaction set must be provided. Because user preferences require flexibility within the techniques for referring to an object, no particular methodology is specified. The only requirement is the assignment of an object identification number attributable to the object which should be unique for a sufficient time to avoid any confusion. Multiple references to identify all related transaction sets and objects are permitted. The transaction set is not media dependent, is not limited to a specific transmission protocol, and can be linked to other transaction sets. Interchanges may contain functional groups containing transaction sets, packages, or transaction sets and packages. The transaction set may be included in any functional group within an interchange. Only one package may be conveyed within a single occurrence of an Associated Data Transaction Set.

Notes:

1. The 102 transaction set may be sent in the same functional group as the 102 transaction set's parent transaction or independently, in either the same or a different interchange. When the 102 transaction set accompanies its parent transaction, the Functional ID Code in GS01 will be the Functional ID Code of the parent transaction. When carried in a functional group containing only the 102 transaction set(s), the Functional ID Code in GS01 will be 'AC'.

2. The 102 transacion set MAY NOT be carried in the same functional group as its parent if the parent is based on an ASC X12 verion/release prior to 004020.

3. When the 102 transaction set is carried in the same functional group as the parent transaction, both the parent and 102 transaction sets must be based on the same version/release of the ASC X12 standard.

Page No.	Pos. No.	Seg. ID	Name	Req. Des.	Max.Use	Loop Repeat	Notes and Comments
3	0100	ST	Transaction Set Header	M	1		
5	0200	ORI	Associated Object Reference Identification	M	1		n1
7	0300	REF	Reference Identification	O	>1		n2
10	0400	OOI	Associated Object Type Identification	M	>1		n3
13	0500	BDS	Binary Data Structure	M	1		n4
14	0600	SE	Transaction Set Trailer	M	1		

Transaction Set Notes

1.   The ORI segment shall identify the object identification reference number. This corresponds to the object identification specified in any related applicable transaction set where the REF (or equivalent) segment is used to link the functional data and object(s).
2.   An occurrence of the REF segment will, if needed, identify a unique application transaction reference number specified in the transaction set associated with the object.
3.   One occurrence of the OOI segment is mandatory and shall be used for file format identification (Code value "13" in data element 1691).
4.   The BDS segment shall contain the object.

Segment:	**ST** Transaction Set Header		
Position:	0100		
Loop:			
Level:			
Usage:	Mandatory		
Max Use:	1		
Purpose:	To indicate the start of a transaction set and to assign a control number		
Syntax Notes:			
Semantic Notes:	1	The transaction set identifier (ST01) is used by the translation routines of the interchange partners to select the appropriate transaction set definition (e.g., 810 selects the Invoice Transaction Set).	
	2	The implementation convention reference (ST03) is used by the translation routines of the interchange partners to select the appropriate implementation convention to match the transaction set definition.	
Comments:			
Notes:	*1. Normally, the functional group header segment entry in GS08 (version / release/ Industry Identifier Code) is used to identify the version/release of the standard and the specific implementation convention used to interpret the data contained within each transaction set included within that functional group instance. However, effective with version/release 004020 and later, it is possible to use the combination of the functional group header segment (i.e., GS08) and the transaction header segment (i.e., ST03) to convey this same information.*		
	2. When both the parent and 102 transaction sets are based on the same version/release (i.e., 004020 or later) and both are included in the same functional group, GS08 is used to identify the version/release of the standard and ST03 (Implementation convention Reference) is used to identify the specific implementation convention.		
	EXAMPLE: ST*102*000001~		

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	ST01	143	**Transaction Set Identifier Code**	M ID 3/3
			Code uniquely identifying a Transaction Set	
			102 Associated Data	
M	ST02	329	**Transaction Set Control Number**	M AN 4/9
			Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	
	ST03	1705	**Implementation Convention Reference**	O AN 1/35
			Reference assigned to identify Implementation Convention	
			1. Use only when ST03 is used to identify the individual implementation convention used to interpret the data contained within the transaction set instance.	

2. When used, cite "004020F102_0".

Segment:	**ORI** Associated Object Reference Identification
Position:	0200
Loop:	
Level:	
Usage:	Mandatory
Max Use:	1
Purpose:	To identify the object identification reference
Syntax Notes:	
Semantic Notes:	
Comments:	
Notes:	*1. A dual cross referencing methodology is employed to link the 102 transaction set and its parent transaction set. A unique reference to the 102 transaction set is conveyed in the parent transaction set.*

2. This segment establishes the link between the 102 transaction set and the parent transaction set. The content of 1/ORI01/0200 identified the parent(s) of the 102 transaction set.

3. The implementation convention of the parent transaction set must identify which data element within the parent transaction set is used to identify the parent within the 102 transaction set.

4. Depending on which data element of the parent transaction set is used as the reference for the 102, a one-to-many or many-to-many relationship can be established. For instance, if BEG03 value of the Purchase Order (850) is used as the reference, one or more 102 transaction set(s) could be associated to a single purchase order since the BEG03 value is assumed to be unique to a single purchase order. However, if the same purchase order used the REF02 value as the cross reference value when the REF01 value was 'VY', Link Sequence Number, then a many-to-many relationship is established for all purchase orders that contain the same REF02 value.

EXAMPLE: (see also the 1/REF/0300 segment notes herein):
*   In this case the parent transaction set contains the "Institution Loan Number" (i.e., code VO) as the unique identifier for the parent transaction set. It also contains a second occurrence of the REF segment containing the "Object Identifier" (i.e., code OIC) as the cross reference to the 102 transaction set (i.e., the data contained in the 102 transaction set ORI segment occurrence).*

   (parent transaction set)   REF*VO*56789~
   (parent transaction set)   REF*OIC*123456~

   Likewise, the 102 transaction set contains an occurrence of the ORI segment containing the unique reference to this transaction set instance. It also contains an occurrence of the REF segment containing the "Application Transaction Reference Number" (i.e., code ACL) as the cross reference to the parent transaction.

(102 transaction set)	*ORI*123456~*	
(102 transaction set)	*REF*ACL*56789~*	

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	**ORI01**	**1690**	**Associated Object Reference Identification**	**M AN 1/36**
			Reference assigned by the application to uniquely identify an object	

Segment:	**REF** Reference Identification
Position:	0300
Loop:	
Level:	
Usage:	Optional
Max Use:	>1
Purpose:	To specify identifying information
Syntax Notes:	1 At least one of REF02 or REF03 is required.
	2 If either C04003 or C04004 is present, then the other is required.
	3 If either C04005 or C04006 is present, then the other is required.
Semantic Notes:	1 REF04 contains data relating to the value cited in REF02.
Comments:	
Notes:	*EXAMPLE: The 1/REF/0300 segments for a sequence of three 102 transaction sets are presented below. This example supposes that three transaction sets are required to communicate a single object. The first pair of segments identify report that this 102 transaction set is the first in a series of transaction sets. The cross reference to the parent transaction set is also passed. Note that the second pair of 1/REF/0300 segments increment the sequence number to the next in the series and contain the same cross reference value. Finally, the third pair report that this is the final transaction set in the series, that the series consisted of three 102 transaction sets, and again the cross reference value is presented.*

first or only 102 in the sequence   *REF*ACO*1~*
cross reference value   *REF*ACL*56789~*

intermediate 102 in the sequence   *REF*ACP*2~*
cross reference value   *REF*ACL*56789~*

last 102 in the sequence   *REF*ACQ*3~*
cross reference value   *REF*ACL*56789~*

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	REF01	128	**Reference Identification Qualifier**	M ID 2/3

Code qualifying the Reference Identification

1. ACO will only be used when a sequence of more than one of 102 transaction sets is used to convey a single object. The 'ACO' code must be used in the first 102 transaction set of a sequence. The sequence may include one or more transaction set(s) where the 1/REF/0300 segment REF01 code value is 'ACP' and must contain one transaction set where the 1/REF/0300 segment REF01 code value is 'ACQ.'

2. ACP will only be used if tow or more 102 transaction sets of the same sequence have been created that carry the ACO and ACP code values in the 1/REF/0300 segment.

3. ACQ will only be used to complete a sequence of 102 transaction sets. At least one 102 transaction set with the value ACO or ACP in REF01 of the 1/REF/0300 segment must precede the 102 transaction set using the ACQ value.

4. If the sequence consists of only one 102 transaction set, the 1/0300 REF01 values ACO, ACP, and ACQ will not be used.

(see example above)

ACL	Application Transaction Reference Number	

An occurrence of the 1/REF/0300 segment containing this qualifier is mandatory for each 102 transaction set. The REF02 value will be a unique reference number for the parent transaction. The location of the unique identification value in the parent transaction is based on the specific implementation of the parent transaction. The parent transaction's implementation convention must be consulted to determine how the value is being communicated. (see example above)

ACO   First Transfer Number

Indication used for the first in a sequence of transaction sets related to the same topic; can only appear once at the start of the sequence

ACP   Continuous Transfer Number

Indication used for any transaction set, other than the first or last, indicating the transfer sequence of transaction sets related to the same topic; may appear zero or more times within the sequence

ACQ   Last Transfer Number

Indication used for the last in a sequence of transaction sets related to the same topic; can only appear once at the end of the sequence

REF02   **127**   **Reference Identification**   **X AN 1/30**

Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier

1. The REF02 values begin with '1' and increment by one for each 102 transaction set in the sequence.

2. When the 1/REF01/0300 value is 'ACL', the REF02 value will be a unique reference number for the 102 transaction set. This reference number will also be carried in the parent transaction set. The location of the reference value in the parent transaction set is based on the specific implementation of the parent transaction. The parent transaction set's IC must be consulted to determine how the value isbeing communicated.

Not Used	REF03	352	**Description**	X	AN 1/80

A free-form description to clarify the related data elements and their content

Not Used	REF04	C040	**Reference Identifier**	O	

To identify one or more reference numbers or identification numbers as specified by the Reference Qualifier

Not Used	C04001	128	**Reference Identification Qualifier**	M	ID 2/3

Code qualifying the Reference Identification

Refer to 004020 Data Element Dictionary for acceptable code values.

Not Used	C04002	127	**Reference Identification**	M	AN 1/30

Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier

Not Used	C04003	128	**Reference Identification Qualifier**	X	ID 2/3

Code qualifying the Reference Identification

Refer to 004020 Data Element Dictionary for acceptable code values.

Not Used	C04004	127	**Reference Identification**	X	AN 1/30

Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier

Not Used	C04005	128	**Reference Identification Qualifier**	X	ID 2/3

Code qualifying the Reference Identification

Refer to 004020 Data Element Dictionary for acceptable code values.

Not Used	C04006	127	**Reference Identification**	X	AN 1/30

Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier

Segment:		**OOI** Associated Object Type Identification	
Position:		0400	
Loop:			
Level:			
Usage:		Mandatory	
Max Use:		>1	
Purpose:		To identify attributes and status related to the object	
Syntax Notes:			
Semantic Notes:		1 Object type qualifier (data element 1691) defines the object attribute (either data element 1692 or 1693), instructing the receiving system on how to process and route the object.	
Comments:			
Notes:		*EXAMPLE:*	

EXAMPLE:
 OOI*1*1*WINDOWS95~
 OOI*1*23*MICROSOFT WORD~
 OOI*1*25*6~
 OOI*1*12*RFQ0100~
 OOI*1*13*DOC~

This example identified a Microsoft Word Version 6 document called "RFQ0100." This file was created on a Windows 95 operating system.

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	OOI01	1694	**Object Identification Group**	M AN 1/2
			To link related object identifications	
			The value '1' is always used.	
M	OOI02	1691	**Object Type Qualifier**	M ID 1/3
			Code identifying type of object	
			1 Computer Environment Type	
			This value carries a name or identifier for the computer operating system on which the object was created.	
			2 Computer Environment Version	
			3 Computer Environment Release	
			4 Computer Environment Status	
			5 Computer Environment Name	
			6 Non-ASC X12 Security Level Code	
			7 Non-ASC X12 Security Version	
			8 Non-ASC X12 Security Release	
			9 Non-ASC X12 Security Technique	
			10 Non-ASC X12 Security Free Text Information	
			11 File Identification By Number	

12		File Identification By Name
13		File Format

An occurence of the OOI segment containing this qualifier must be present in each 102 transaction set.

14		File Version
15		File Release
16		File Status
17		File Size
18		File Description
19		File Block Type
20		File Block Length
21		File Record Length
22		Program Identification By Number
23		Program Identification By Name
24		Program Type
25		Program Version
26		Program Release
27		Program Status
28		Program Description
29		Program Size
35		Compression Technique Identification
36		Compression Technique Version
37		Compression Technique Release
38		Drawing Identification By Name
39		Drawing Identification By Number
40		Drawing Type
41		Drawing Format
42		Drawing Version
43		Drawing Release
44		Drawing Status
45		Drawing Size
46		Drawing Description
47		External Standard Requirement
48		Character Set Repertoire Identification
49		Character Set Encoding Technique
50		Character Set Encoding Technique Code Page
51		Certificate Type
52		Certificate Version
53		Certificate Release
54		Certificate Status

			55	Certificate Level		
			56	Certificate Identification By Name		
			57	Certificate Identification By Number		
			58	Certificate Format		
			59	Certificate Code Page		

M   **OOI03**   **1692**   **Object Attribute Identification**   **M**   **AN 1/256**

Identification of the attribute applying to the object type

     OOI04   **1693**   **Controlling Agency**   **O**   **ID 1/3**

Code identifying the organization controlling the object specification

Refer to 004020 Data Element Dictionary for acceptable code values.

Segment:		**BDS** Binary Data Structure		
Position:	0500			
Loop:				
Level:				
Usage:	Mandatory			
Max Use:	1			
Purpose:	To transfer binary data in a single data segment, convey a critical filter for transmission and allow identification of the end of the data segment through a count; there is no identification of the internal structure of the binary data in this segment			
Syntax Notes:				
Semantic Notes:				
Comments:				
Notes:	*EXAMPLE:*			

EXAMPLE:
   BDS*B64*17964*FF1C4D22BAACE2F6...~

The binary object, 17964 octets in length, is carried in this segment. The BDS01 value indicates that the binary value has been filtered using Base 64 encoding.

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	BDS01	1570	**Filter ID Code**	M ID 3/3

Code specifying the type of filter used to convert data code values

1. Some communications networks do not support raw binary data. These networks require users to transform (filter) the data into a form that is 'friendly' to their network. The filtering process can directly impact both senders and receivers of the data. Data size will change based on the specific filter type selected. Growth of the data can range from 33 to 100 percent based on the specific filter used.

2. It is recommended that a data compression process be used on the binary data prior to filtering to reduce the amount of data sent over the network. Information related to the compression of the binary data would be passed in the 1/OOI/0500 segment.

ASC	ASCII Filter
B64	Base 64
HDC	Hexadecimal Filter
NOF	No Filter
UUE	UUencoding

	Ref. Des.	Data Element	Name	Attributes
M	BDS02	784	**Length of Binary Data**	M N0 1/15

The length in integral octets of the binary data

	Ref. Des.	Data Element	Name	Attributes
M	BDS03	785	**Binary Data**	M B 1/*N/A*

A string of octets which can assume any binary pattern from hexadecimal 00 to FF

Segment:	SE **Transaction Set Trailer**			
Position:	0600			
Loop:				
Level:				
Usage:	Mandatory			
Max Use:	1			
Purpose:	To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments)			
Syntax Notes:				
Semantic Notes:				
Comments:	1	SE is the last segment of each transaction set.		

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	SE01	96	**Number of Included Segments**	M N0 1/10
			Total number of segments included in a transaction set including ST and SE segments	
M	SE02	329	**Transaction Set Control Number**	M AN 4/9
			Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	